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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,237	08/28/2001	Eric Chapoulaud	ORM-166CI	5289

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WOOD, HERRON & EVANS, LLP
2700 CAREW TOWER
441 VINE STREET
CINCINNATI, OH 45202

EXAMINER
BUMGARNER, MELBA N

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 08/15/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/941,237	Applicant(s) CHAPOULAUD ET AL.	
	Examiner Melba Bumgarner	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-41 and 49-52* is/are pending in the application.

4a) Of the above claim(s) *26-31,38-41 and 49-52* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I and species of a method of manufacturing an orthodontic appliance, claims 32-37, in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. During a telephone conversation with Joseph Jordan on August 4, 2003 a provisional election was made further restrict the species of a method of making custom orthodontic appliance, amended claims 26-30 as not directed to the elected species. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 32-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The method steps in claim 32 are incomplete in that they are not directed to "manufacturing an orthodontic appliance". In claim 34, it is unclear what is meant by "to indirectly shape an orthodontic appliance . . ." In claim 35, recitation of "said shape" lacks sufficient antecedent basis and it is unclear what is meant by "or component thereof therein". In claim 37, recitation of "said first portion" and "said second portion" lack sufficient antecedent basis. The claims were examined on the merits to the extent as best understood by the examiner in view of the 35 UC 112 rejections.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brodkin et al. (6,322,728). Brodkin et al. disclose a method of manufacturing a dental restoration comprising producing digital data defining a three dimensional surface of a dental tooth form (column 1 line 44); depositing material, in accordance with the digital data, layer by layer in a plurality of layers each constituting a two dimensional cross-section of a solid object having a edge defined by the data, the layers being stacked in a third dimension to form the solid object (column 2 line 40); however, they do not show

the digital data defining an orthodontic appliance. It is held to be an obvious matter of choice to one of ordinary skill in the art at the time the invention was made to modify the method of Brodkin et al. to have digital data defining an orthodontic appliance instead of the tooth form, since the claimed invention results in forming "the solid object having a three dimensional surface defined by the data" and not the orthodontic appliance, and both dental restorations and orthodontic appliances are positioned and applied to the teeth of a patient. Furthermore, the preamble is directed to the alternative of "indirectly" manufacturing an orthodontic appliance. As to claim 35, the solid object is a pattern and the manufacturing further includes forming a mold with the pattern and casting the component (column 9 line 26). As to claim 36, the material is selectively formed in each layer of a first portion of material that is removable and a second portion that remains after removable of the first portion to form a solid object the shape of the component.

8. Claims 32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink et al. (5,510,066). Fink et al. disclose a method of manufacturing a solid object comprising producing digital data defining a three dimensional surface of an object 10; depositing material, in accordance with the digital data, layer by layer in a plurality of layers each constituting a two dimensional cross-section of a solid object having a edge defined by the data, the layers being stacked in a third dimension to form the solid object 12; however, they do not show the digital data defining an orthodontic appliance. It is held to be an obvious matter of choice to one of ordinary skill in the art at the time the invention was made to modify the method of Fink et al. to have digital data defining an orthodontic appliance instead of the object, since the claimed invention

results in forming "the solid object having a three dimensional surface defined by the data" and not the orthodontic appliance, and Fink et al teach the method for fabricating articles of manufacture in general. Furthermore, the preamble is directed to the alternative of "indirectly" manufacturing an orthodontic appliance. As to claim 35, the solid object is a pattern and the manufacturing further includes forming a mold with the pattern and casting the component (column 1 line 45).

9. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brodkin et al. in view of Helinski (5,1236,515). Brodkin et al. disclose a method that shows the limitations as described above; however, they do not show the material of two types of wax. Helinski teaches a method of manufacturing an object wherein the material is wax of two types (column 3 line 4), one forming first portion of the material and the other forming second portion of the material, the selective jet printing of the layers to define a cross section of the object with the second portion forming the pattern and being surrounded by a removable medium formed of the first portion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Brodkin et al. to use the material of Helinski to use two materials having different characteristic and easily removing one of the materials in a manner determined by the characteristic as taught by Helinski.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 703-305-0740. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-308-2708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

Melba Bumgarner

Melba Bumgarner

KEVIN SHAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

8/14/03